

REMARKS

REJECTION UNDER 35 U.S.C. §102

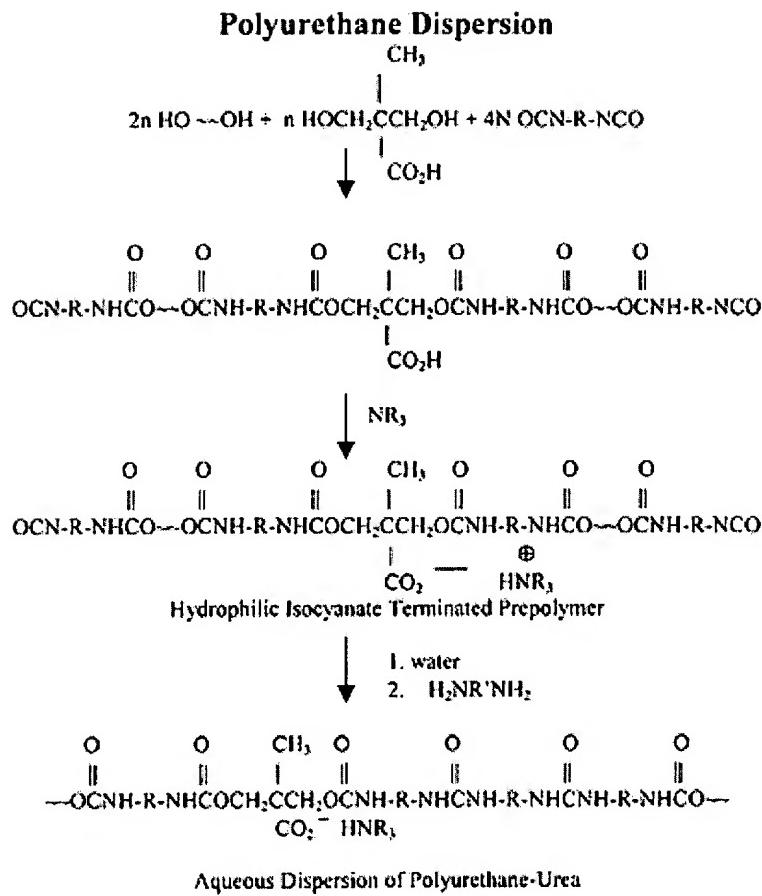
In the Office Action, at pages 2-3, numbered paragraphs 2-3, claims 1-3, 5-7, and 9-10 were rejected under 35 U.S.C. §102(e) as being anticipated by Wen et al. (USPN 6,077,897; hereafter "Wen '897" or 6,159,639; hereafter "Wen '639"). This rejection is traversed and reconsideration is requested.

It is well understood by those skilled in the art that "polyurethanes" is a generic term used to describe polymers obtained by reacting isocyanates with at least one hydroxyl-containing compound, amine containing-compound, or mixture thereof. Polyurethanes are generally hydrophobic and not water-dispersable.

Reactive two-component polyurethane coatings historically have been stringently protected from water, but in the early 1990's it was shown that such reactive systems could actually be formulated using water as the carrier and still produce films with outstanding appearance and barrier properties. Such waterborne polyurethanes refer to polyurethanes that include water as a solvent and dry by water evaporation.

The introduction of two-component waterborne polyurethane systems provides a means to formulate low to ultra-low volatile organic compounds (VOC) and hazardous air pollutants (HAPs) systems, with performance properties that closely approach those of two-component solvent-borne polyurethanes. Typically, a two-component waterborne polyurethane system utilizes a hydroxyl-functional co-reactant that has a stable dispersion in water. Ideally, the polyol (component I) is formulated with all flow aids, thickeners, pigments, and water incorporated into the mixture. A polyisocyanate (component II) is then mixed into component I prior to application, forming a stable dispersion. This is then applied to a substrate and can be cured under ambient conditions or force dried under a variety of bake conditions.

An example of the formation of a polyurethane dispersion is shown below.



Thus, Wen '897 and '639 both describe waterbourne polyurethanes. Wen '897 adds a first solvent, which is described as water (see Example 1, col. 5, lines 15-21) to a prepolymer in acetone (which is an organic solvent) and lithium diaminosulfonate to prepare a waterborne polyurethane, and the acetone is removed. Wen '639 adds water (see Example 1, col. 3, lines 24-30) to a prepolymer in acetone (which is an organic solvent) and lithium diaminosulfonate to prepare a waterborne polyurethane, and the acetone is removed.

In contrast, claims 1 and 9 of the present invention describe preparation of the polyurethane by reacting a pre-polymer with a cross-linking agent, an organic solvent and a lithium salt. No water is introduced into the reaction.

In addition, claims 1 and 9 have been amended to recite that the cross-linking agent is glycerol ethoxylate or glycerol propoxylate (see basis for this limitation in paragraph 33 of the

specification). Neither Wen '897 nor Wen '639 recites the use of glycerol ethoxylate or glycerol propoxylate as the cross-linking agent.

Thus, it is respectfully submitted that amended claims 1 and 9 of the present invention are not anticipated under 35 U.S.C. §102(e) by Wen et al. (USPN 6,077,897 or 6,159,639). Since claims 2-7 ad 10 depend from amended claims 1 and 9, respectively, claims 2-7 and 10 are submitted to be not anticipated under 35 U.S.C. §102(e) by Wen et al. (USPN 6,077,897 or 6,159,639) for at least the reasons that amended claims 1 and 9 are submitted to be not anticipated under 35 U.S.C. §102(e) by same.

REJECTION UNDER 35 U.S.C. §103

In the Office Action, at page 4, numbered paragraphs 4-5, claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Wen et al. (USPN 6,077,897; hereafter "Wen '897" or 6,159,639; hereafter "Wen '639") in view of Schlueter et al. (USPN 5,985,419; hereafter "Schlueter"). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

Claim 4 has been amended.

It is respectfully submitted that Wen et al. (USPN 6,077,897 and 6,159,639) do not teach using a cross-linking agent selected from the group consisting of glycerol ethoxylate and glycerol propoxylate, as is recited in amended claim 1 of the present invention. In addition, through Schlueter teaches using a cross-linking agent, Schlueter fails to teach using a cross-linking agent selected from the group consisting of glycerol ethoxylate and glycerol propoxylate.

Further, It is respectfully submitted that the courts have held that the Examiner may not suggest modifying references using the present invention as a template absent a suggestion of the desirability of the modification in the prior art. *In re Fitch*, 23 U.S.P.Q.2d 1780, Fed Cir. 1992. Something in the prior art as a whole must suggest the desirability, and thus, the obviousness, of making the combination. *Alco Standard Corp. v. Tennessee Valley Authority*, 808 F. 2d 1490, 1 U.S.P.Q. 2d 1337 (Fed. Cir. 1986). When a rejection depends on a combination of prior art references, there must be some teaching, suggestion or motivation to combine the references. *In re Geiger*, 815 F.2d 686, 688 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987). Thus, since there is no teaching or suggestion of combining Wen et al. (USPN 6,077,897 and 6,159,639) with Schlueter et al. (USPN 5,985,419), it is respectfully submitted that amended claim 1 is

patentable under 35 U.S.C. §103(a) over Wen et al. (USPN 6,077,897 and 6,159,639) in view of Schlueter et al. (USPN 5,985,419).

Since claim 4 depends from amended claim 1, it is respectfully submitted that claim 4 is patentable under 35 U.S.C. §103(a) over Wen et al. (USPN 6,077,897 and 6,159,639) in view of Schlueter et al. (USPN 5,985,419) for at least the reasons that amended claim 1 is submitted to be patentable under 35 U.S.C. §103(a) over same.

CONCLUSION

In accordance with the foregoing, claims 1, 4 and 9 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-7, 9-17, and 19-20 are under consideration. Claims 20-30 are withdrawn. Reconsideration is respectfully requested.

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,
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Date: May 18, 2004

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